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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,177	12/20/2004	Seung-Jac Moon	20010-08USA	5248

7590 12/22/2005

JHK Law  
PO Box 1078  
La Canada, CA 91012-1078

EXAMINER

COVINGTON, RAYMOND K

ART UNIT PAPER NUMBER

1625

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/519,177

Applicant(s)

MOON ET AL.

Examiner

Raymond Covington

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/6/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun US 4,783,445 in view of Kawachi et al US 4,981,948.

Sun teaches a process for polymerizing polycarbonates using a catalyst, which catalyst is prepared by oxidizing a dicarboxylic acid or anhydride and a zinc compound. See, for example, column 1 lines 30-37 and column 2 lines 45+, example 1. zinc oxide and zinc acetate are zinc precursors as also taught by Sun. See column 1 lines 45-54. It is noted that maleic anhydride reads on the dicarboxylic precursor as the acid is readily obtained therefrom upon the addition of water (Morrison&Boyd pp 668).

Sun differs in that water is not taught to be present. However, Kawachi et al teach a process for polymerizing polycarbonates using a catalyst, which catalyst is prepared by oxidizing a dicarboxylic acid, e.g. malonic acid, and a zinc compound, e.g. zinc oxide, in the presence of water. See, for example, column 4 lines 1-58,

column 3 lines 24-25, 58-62, 65-67, column 6 example 1 for catalyst preparation and column 1 lines 42-45.

It is also noted water is disclosed as being used in place of the organic solvents. See column 3 lines 58-70. in addition water would be present in-situ from the reaction process itself.

In view of the foregoing to modify the teachings of Sun in view of Kawachi et al would have been an obvious expedient to one of ordinary skill in the art as the results, enhanced transparency in the final product produced from using the catalyst prepared in this way, would not have been unexpected and therefore unpatentable. As to the ratios, water volume etc. no more than routine skill is involved in adjusting the amount of a component of the claimed process to suit a particular starting material in order to achieve the result taught in the prior art.

2. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun US 4,783,445 in view of Kawachi et al US 4,981,948.

Both Sun and Kawachi et al are applied as in the above rejection. Sun also teaches using the above-prepared catalyst to polymerize alkylene oxide, e.g. epoxide, with carbon dioxide. See, column 1 lines 6-8. Kawachi et al likewise teach using the above-prepared catalyst to polymerize alkylene oxide, e.g.

epoxide, with carbon dioxide. See, for example, column 4 lines 60-70, column 5 lines 1-55.


No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Covington whose telephone number is (571) 272-0681. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, C. Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Cecilia J. Tsang  
Supervisory Patent Examiner  
Technology Center 1600

Raymond Covington  
Examiner  
Art Unit 1625